UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/690,239	10/21/2003	Aaron L. Hill	ST8723US	4927

22203 7590 09/14/2005

KUSNER & JAFFE
HIGHLAND PLACE SUITE 310
6151 WILSON MILLS ROAD
HIGHLAND HEIGHTS, OH 44143

EXAMINER	
CHIN, BRAD Y	
ART UNIT	PAPER NUMBER
1744	

DATE MAILED: 09/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/690,239	Applicant(s) HILL ET AL.
	Examiner Brad Y. Chin	Art Unit 1744

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *21 October 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-14* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-14* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *21 October 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *1/20/2004*.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

1. Claims 3 and 11 are objected to because of the following informalities: Applicant should remove the acronym, "(VHP)" from the recited claim language. Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claim 1-14 are rejected under 35 U.S.C. 102(b) as being anticipated by Martin et. al. [WO 01/21223].

Regarding claim 1, Martin et. al. teach a vapor decontamination system for decontaminating a defined region, the system comprising: a chamber defining a region (See Figures 1 and 2; sealed chamber 10); a generator for generating a vaporized hydrogen peroxide from a solution of hydrogen peroxide and water (See Figures 1 and 2; See page 5 – preferred that sterilant vapour is hydrogen peroxide and water vapour; liquid sterilant supply 27 and evaporator 26); a closed loop circulating system for supplying the vaporized hydrogen peroxide to the region (See Figures 1 and 2; circulating conduit 12); a destroyer within the closed loop circulating system for breaking down the vaporized hydrogen peroxide (See Figures 1 and 2; See page 5 – the hydrogen peroxide extracted from the chamber with the circulating gas is subjected to catalytic action to break the hydrogen peroxide down into water vapour and oxygen, the former being extracted from the gas before the gas is recirculated through the

enclosure; deactivate sterilant 22); a bypass conduit bypassing the destroyer (See Figures 1 and 2; See page 7 – parallel branches, one of which contains means to heat the gas and means to supply a sterilant vapour or vapours to the gas, e.g. second parallel branch for bypassing deactivate sterilant 22); and a controller operable to cause vaporized hydrogen peroxide from the generator to flow through the closed loop circulating system during pre-determined phases of operation (See page 7 – parallel branches in the circuit one of which contains means to deactivate a sterilant to be added to the carrier gas flowing through the circuit and means to dehumidify the gas and the other of which branches contains means to heat the gas and means to supply a sterilant vapour or vapours to the gas; See pages 11-12).

Regarding claim 2, Martin et. al. teach the vapor decontamination system for decontaminating a defined region, wherein the controller is programmed to include a drying phase of operation, a conditioning phase of operation, a decontamination phase of operation, and an aeration phase of operation (See page 7 – parallel branches in the circuit one of which contains means to deactivate a sterilant to be added to the carrier gas flowing through the circuit and means to dehumidify the gas and the other of which branches contains means to heat the gas and means to supply a sterilant vapour or vapours to the gas; See pages 11-12).

Regarding claim 3, Martin et. al. teach the vapor decontamination system for decontaminating a defined region, wherein the controller causes vaporized hydrogen peroxide to bypass the destroyer during the conditioning phase (See page 7 – the apparatus further comprising a control means for determining through which of the parallel branches the gas flows; See page 7 – parallel branches in the circuit one of which contains means to deactivate a sterilant to be added to the carrier gas flowing through the circuit and means to dehumidify the gas and the other of which branches contains means to heat the gas and means to supply a sterilant vapour or vapours to the gas; See pages 11-12).

Regarding claim 4, Martin et. al. teach the vapor decontamination system for decontaminating a defined region, further comprising an air dryer downstream of the dryer (See Figures 1 and 2; See page 10 – a desiccant dryer may perform the dehumidification process).

Regarding claim 5, Martin et. al. teach a vapor decontamination system for decontaminating a region, the system having a generator for generating vaporized hydrogen peroxide (See Figures 1 and 2; See page 5 – preferred that sterilant vapour is hydrogen peroxide and water vapour; liquid sterilant supply 27 and evaporator 26), a closed loop system for supplying the vaporized hydrogen peroxide to the region (See Figures 1 and 2; circulating conduit 12), and a destroyer for breaking down the vaporized hydrogen peroxide (See Figures 1 and 2; See page 5 – the hydrogen peroxide extracted from the chamber with the circulating gas is subjected to catalytic action to break the hydrogen peroxide down into water vapour and oxygen, the former being extracted from the gas before the gas is recirculated through the enclosure; deactivate sterilant 22), a bypass conduit for causing fluid to flow through the closed loop system to bypass the destroyer (See Figures 1 and 2; See page 7 – parallel branches, one of which contains means to heat the gas and means to supply a sterilant vapour or vapours to the gas, e.g. second parallel branch for bypassing deactivate sterilant 22), and a controller for controlling fluid flow through the bypass conduit (See page 7 – parallel branches in the circuit one of which contains means to deactivate a sterilant to be added to the carrier gas flowing through the circuit and means to dehumidify the gas and the other of which branches contains means to heat the gas and means to supply a sterilant vapour or vapours to the gas; See pages 11-12).

Regarding claim 6, Martin et. al. teach the vapor decontamination system for decontaminating a defined region, wherein the closed loop system includes a first fluid flow path wherein fluid within the system flows through the destroyer and a second fluid flow path wherein

the fluid within the system bypasses the destroyer, the bypass conduit defining the second fluid flow path (See Figures 1 and 2; See page 7 – parallel branches in the circuit one of which contains means to deactivate a sterilant to be added to the carrier gas flowing through the circuit and means to dehumidify the gas and the other of which branches contains means to heat the gas and means to supply a sterilant vapour or vapours to the gas).

Regarding claim 7, Martin et. al. teach the vapor decontamination system, further comprising valve means for controlling flow through either the first fluid flow path or the second fluid flow path (See Figures 1 and 2; non-return valve 21 and three-way valve 31).

Regarding claim 8, Martin et. al. teach the vapor decontamination system, wherein the controller causes fluid to flow through the second fluid flow path during a conditioning phase of the system (See page 10 – in the second parallel branch is a heater 25 to raise the gas temperature prior to entering an evaporator 26, in which the liquid sterilant is turned to vapour by heating. A liquid sterilant supply 27 controls the liquid flow to the evaporator).

Regarding claim 9, Martin et. al. teach the vapor decontamination system, wherein the system includes an air dryer where the air dryer is part of the first fluid flow path (See Figures 1 and 2; See Figures 1 and 2; See page 10 – a desiccant dryer may perform the dehumidification process).

Regarding claim 10, Martin et. al. teach a closed loop, flow-through vapor phase decontamination system, comprising: a sealable chamber having an inlet and an outlet port (See Figures 1 and 2; sealed chamber 10 having an inlet and an outlet port); a closed loop conduit system having a first end fluidly connected to the inlet port and a second end fluidly connected to the outlet port (See Figures 1 and 2; circulating conduit 12; See pages 8 and 9 – carrier gas and sterilizing gas or gases are drawn from the sealed chamber 10 to the apparatus through sealed connections fluidly connecting the chamber to the apparatus); a blower

connected to the conduit for re-circulating a carrier gas flow into, through, and out of the chamber (See Figures 1 and 2; fans 19, 20, and 30, respectively); a source for delivering vaporized sterilant into the carrier gas flow upstream of the inlet port (See Figures 1 and 2; liquid sterilant 27 and evaporator 26); a destroyer downstream of the outlet port for destroying the vaporized sterilant (See Figures 1 and 2; See page 5 – the hydrogen peroxide extracted from the chamber with the circulating gas is subjected to catalytic action to break the hydrogen peroxide down into water vapour and oxygen, the former being extracted from the gas before the gas is recirculated through the enclosure; deactivate sterilant 22); a bypass conduit for directing flow through the closed loop conduit system around the destroyer (See Figures 1 and 2; See page 7 – parallel branches, one of which contains means to heat the gas and means to supply a sterilant vapour or vapours to the gas, e.g. second parallel branch for bypassing deactivate sterilant 22); and a controller for controlling flow through the bypass conduit (See page 7 – parallel branches in the circuit one of which contains means to deactivate a sterilant to be added to the carrier gas flowing through the circuit and means to dehumidify the gas and the other of which branches contains means to heat the gas and means to supply a sterilant vapour or vapours to the gas; See pages 11-12).

Regarding claim 11, Martin et. al. teach the vapor decontamination system, wherein the sterilant is vaporized hydrogen peroxide (See Figures 1 and 2; See page 5 – preferred that sterilant vapour is hydrogen peroxide and water vapour).

Regarding claim 12, Martin et. al. teach the vapor decontamination system, wherein the controller directs flow through the second fluid flow path during a conditioning phase of operation (See page 10 – in the second parallel branch is a heater 25 to raise the gas temperature prior to entering an evaporator 26, in which the liquid sterilant is turned to vapour by heating. A liquid sterilant supply 27 controls the liquid flow to the evaporator).

Regarding claim 13, Martin et. al. teach the vapor decontamination system, further comprising an air dryer disposed downstream from the destroyer (See Figures 1 and 2; See Figures 1 and 2; See page 10 – a desiccant dryer may perform the dehumidification process).

Regarding claim 14, Martin et. al. teach the vapor decontamination system, wherein the blower is disposed downstream of the chamber, between the destroyer and the chamber (See Figures 1 and 2; fans 19, 20, and 30, respectively, disposed downstream of sealed chamber 10, between deactivate sterilant 22 and sealed chamber 10).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later

invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 1 and 4-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Childers [U.S. Patent No. 5,906,794] in view of Faddis [U.S. Patent No. 5,334,355].

Regarding claim 1, Childers teaches a vapor decontamination system for decontaminating a defined region, the system comprising: a chamber defining a region (See Figure 6; See col. 5, lines 45-47 – sealable chamber 10 having an inlet port 12 and an outlet port 14); a generator for generating a vaporized hydrogen peroxide from a solution of hydrogen peroxide and water (See Figure 6; See col. 5, lines 51-58 – liquid sterilant vaporizer unit 18); a closed loop circulating system for supplying the vaporized hydrogen peroxide to the region (See Figure 6; See col. 5, lines 43-50 – conduit circuit 16 fluidly connected to the chamber ports to provide a closed-loop flow path for recirculating a carrier gas into, through, and out of the chamber 10); a destroyer within the closed loop circulating system for breaking down the vaporized hydrogen peroxide (See Figure 6; See col. 5, lines 59-65 – converter 20); and a controller operable to cause vaporized hydrogen peroxide from the generator to flow through the closed loop circulating system during pre-determined phases of operation (See Figure 6; See col. 6, line 58 to col. 7, line 13 – processing unit 42). Childers fails to teach the vapor decontamination system comprising a bypass conduit bypassing the destroyer and a controller operable to cause vaporized sterilant from the generator to bypass the destroyer during a pre-determined phase of operation. Faddis teaches a vapor decontamination system for decontaminating a defined region, the system comprising: a bypass conduit bypassing the destroyer (See col. 7, lines 45-61 – additionally for controlling effluent passage for destruction, the effluent out line 60 connects to the PLC 14 for providing a sensing of effluent presence, and is joined to an ozone emergency venting line 90, which contacts an inline pressure gauge 92

that provides data to the PLC 14) and a controller operable to cause vaporized sterilant from the generator to bypass the destroyer during a pre-determined phase of operation (See col. 7, lines 45-61). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Faddis with the system, as described in Childers, for providing a bypass conduit bypassing the destroyer because the bypass conduit of Faddis provides a means for controlling the passage of effluent sterilant vapor from sealable chamber 10 to converter 20, where the bypass conduit system of Faddis provides a means for monitoring the effluent sterilant vapor out line with a pressure gauge, provides means for controlling the effluent sterilant vapor destruction using PLC, and provides a means for venting a build-up of effluent sterilant vapor from the system using an emergency venting line.

Regarding claim 4, Childers teaches the vapor decontamination system, further comprising an air dryer downstream of the destroyer (See Figure 6; See col. 5, line 66 to col. 6, line 7 – adjustable drying unit 24).

Regarding claim 5, Childers teaches a decontamination system for decontaminating a region, the system having a generator for generating vaporized hydrogen peroxide (See Figure 6; See col. 5, lines 51-58 – liquid sterilant vaporizer unit 18), a closed loop system for supplying the vaporized hydrogen peroxide to the region (See Figure 6; See col. 5, lines 43-50 – conduit circuit 16 fluidly connected to the chamber ports to provide a closed-loop flow path for recirculating a carrier gas into, through, and out of the chamber 10), a destroyer for breaking down the vaporized hydrogen peroxide (See Figure 6; See col. 5, lines 59-65 – converter 20), and a controller for controlling fluid flow through the closed loop system (See Figure 6; See col. 6, line 58 to col. 7, line 13 – processing unit 42). Childers fails to teach a bypass conduit for causing the fluid to flow through the closed loop system to bypass the destroyer and a controller for controlling fluid flow through the bypass conduit. Faddis teaches a vapor decontamination

system for decontaminating a defined region, the system comprising: a bypass conduit bypassing the destroyer (See col. 7, lines 45-61 – additionally for controlling effluent passage for destruction, the effluent out line 60 connects to the PLC 14 for providing a sensing of effluent presence, and is joined to an ozone emergency venting line 90, which contacts an inline pressure gauge 92 that provides data to the PLC 14) and a controller operable to cause vaporized sterilant from the generator to bypass the destroyer during a pre-determined phase of operation (See col. 7, lines 45-61). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Faddis with the system, as described in Childers, for providing a bypass conduit bypassing the destroyer because the bypass conduit of Faddis provides a means for controlling the passage of effluent sterilant vapor from sealable chamber 10 to converter 20, where the bypass conduit system of Faddis provides a means for monitoring the effluent sterilant vapor out line with a pressure gauge, provides means for controlling the effluent sterilant vapor destruction using PLC, and provides a means for venting a build-up of effluent sterilant vapor from the system using an emergency venting line.

Regarding claim 6, Childers fails to teach the decontamination system, wherein the closed loop system includes a first fluid flow path wherein fluid within the system flows through the destroyer and a second fluid flow path wherein the fluid within the system bypasses the destroyer, the bypass conduit defining the second fluid flow path. Faddis teaches a vapor decontamination system for decontaminating a defined region, the system comprising: a first fluid flow path wherein fluid within the system flows through a destroyer (See Figure 3; See col. 7, lines 45-61 – effluent is pulled from the primary and secondary chambers 35 and 18, respectively, through effluent out line 60 by pump 61 that flow passing through valve 62 and into the spent sterilization agent destruct and ambient air mixing device 64, e.g. the destruct device)

and a bypass conduit bypassing the destroyer (See col. 7, lines 45-61 – additionally for controlling effluent passage for destruction, the effluent out line 60 connects to the PLC 14 for providing a sensing of effluent presence, and is joined to an ozone emergency venting line 90, which contacts an inline pressure gauge 92 that provides data to the PLC 14). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Faddis with the system, as described in Childers, for providing a first and second fluid flow path, where a first fluid flow path flows to a destroyer and a second fluid flow path flows through a bypass conduit because such an orientation in Childers provides a means for providing a route of destroying or converting an effluent sterilant vapor emitted from the sealed chamber of Childers into a suitable for disposal or reuse within the system, while another route is provided for monitoring the build-up of effluent sterilant vapor emitted and for releasing the build-up of effluent sterilant vapor through an emergency line if the build-up within the closed-loop system rises above acceptable operating safety levels.

Regarding claim 7, Childers fails to teach the decontamination system further comprising valve means for controlling flow through either the first fluid flow path or the second fluid flow path. Faddis teaches a vapor decontamination system comprising valve means for controlling flow through either the first fluid flow path or the second fluid flow path (See 3; See col. 7, lines 45-61 – valve means 62, 63, and 64). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Faddis with the system, as described in Childers, for providing valve means because such valve means provide a means for controlling the flow of the effluent sterilant vapor emitted from the sealed chamber of Childers through either a first fluid path towards the converter or a second fluid flow path towards the PLC for measuring the effluent presence built up in the closed loop conduit line.

Regarding claim 8, Childers fails to teach the decontamination system, wherein the controller causes fluid to flow through the second fluid flow path during a conditioning phase of the system. Faddis teaches a vapor decontamination system for decontaminating a defined region, the system comprising: a first fluid flow path wherein fluid within the system flows through a destroyer (See Figure 3; See col. 7, lines 45-61 – effluent is pulled from the primary and secondary chambers 35 and 18, respectively, through effluent out line 60 by pump 61 that flow passing through valve 62 and into the spent sterilization agent destruct and ambient air mixing device 64, e.g. the destruct device) and a bypass conduit bypassing the destroyer (See col. 7, lines 45-61 – additionally for controlling effluent passage for destruction, the effluent out line 60 connects to the PLC 14 for providing a sensing of effluent presence, and is joined to an ozone emergency venting line 90, which contacts an inline pressure gauge 92 that provides data to the PLC 14). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Faddis with the system, as described by Childers, because the PLC of Childers controls an effluent emitted from the sealed chamber during a conditioning phase of the system for monitoring a presence of effluent in the effluent out line, and provides a means for venting the effluent out line through an emergency venting line. Such a system incorporated into Childers allows the controller to monitor the presence of effluent sterilant vapor in the closed loop conduit exiting the sealed chamber, preventing a build-up of effluent sterilant vapor in the closed loop conduit exiting the sealed chamber.

Regarding claim 9, Childers teach the decontamination system, wherein the system includes an air dryer where the air dryer is part of the first fluid flow path (See Figure 6; See col. 5, line 66 to col. 6, line 7 – adjustable drying unit 24).

Regarding claim 10, Childers teaches a closed loop, flow-through vapor phase decontamination system, comprising: a sealable chamber having an inlet and an outlet port

(See Figure 6; See col. 5, lines 45-47 – sealable chamber 10 having an inlet port 12 and an outlet port 14); a closed loop conduit system having a first end fluidly connected to the inlet port and a second end fluidly connected to the outlet port (See Figure 6; See col. 5, lines 43-50 – conduit circuit 16 fluidly connected to the chamber ports to provide a closed-loop flow path for recirculating a carrier gas into, through, and out of the chamber 10); a blower connected to the conduit system for re-circulating a carrier gas flow into, through and out of the chamber (See Figure 6; See col. 5, line 66 to col. 6, line 2 – blowing units 22a and 22b); a source for delivering vaporized sterilant into the carrier gas flow upstream of the inlet port (See Figure 6; See col. 5, lines 51-58 – liquid sterilant vaporizer unit 18); a destroyer downstream of the outlet port for destroying the vaporized sterilant (See Figure 6; See col. 5, lines 59-65 – converter 20); and a controller for controlling flow through the closed loop-flow through vapor phase decontamination system (See Figure 6; See col. 6, line 58 to col. 7, line 13 – processing unit 42). Childers fails to teach a bypass conduit for directing flow through the closed loop conduit system around the destroyer and a controller for controlling flow through the bypass conduit. Faddis teaches a vapor decontamination system for decontaminating a defined region, the system comprising: a bypass conduit bypassing the destroyer (See col. 7, lines 45-61 – additionally for controlling effluent passage for destruction, the effluent out line 60 connects to the PLC 14 for providing a sensing of effluent presence, and is joined to an ozone emergency venting line 90, which contacts an inline pressure gauge 92 that provides data to the PLC 14) and a controller operable to cause vaporized sterilant from the generator to bypass the destroyer during a pre-determined phase of operation (See col. 7, lines 45-61). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Faddis with the system, as described in Childers, for providing a bypass conduit bypassing the destroyer because the bypass conduit of Faddis provides a means for controlling the passage of

effluent sterilant vapor from sealable chamber 10 to converter 20, where the bypass conduit system of Faddis provides a means for monitoring the effluent sterilant vapor out line with a pressure gauge, provides means for controlling the effluent sterilant vapor destruction using PLC, and provides a means for venting a build-up of effluent sterilant vapor from the system using an emergency venting line.

Regarding claim 11, Childers teaches the system, wherein the sterilant is vaporized hydrogen peroxide (See col. 4, lines 20-28 – hydrogen peroxide sterilant vapor).

Regarding claim 12, Childers fails to teach the system, wherein the controller directs flow through a second fluid flow path during a conditioning phase of operation. Faddis teaches a vapor decontamination system for decontaminating a defined region, the system comprising: a first fluid flow path wherein fluid within the system flows through a destroyer (See Figure 3; See col. 7, lines 45-61 – effluent is pulled from the primary and secondary chambers 35 and 18, respectively, through effluent out line 60 by pump 61 that flow passing through valve 62 and into the spent sterilization agent destruct and ambient air mixing device 64, e.g. the destruct device) and a bypass conduit bypassing the destroyer (See col. 7, lines 45-61 – additionally for controlling effluent passage for destruction, the effluent out line 60 connects to the PLC 14 for providing a sensing of effluent presence, and is joined to an ozone emergency venting line 90, which contacts an inline pressure gauge 92 that provides data to the PLC 14). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Faddis with the system, as described by Childers, because the PLC of Childers controls an effluent emitted from the sealed chamber during a conditioning phase of the system for monitoring a presence of effluent in the effluent out line, and provides a means for venting the effluent out line through an emergency venting line. Such a system incorporated into Childers allows the controller to monitor the presence of effluent sterilant vapor in the closed

loop conduit exiting the sealed chamber, preventing a build-up of effluent sterilant vapor in the closed loop conduit exiting the sealed chamber.

Regarding claim 13, Childers teaches the system, further comprising an air dryer disposed downstream from the destroyer (See Figure 6; See col. 5, line 66 to col. 6, line 7 – adjustable drying unit 24).

Regarding claim 14, Childers teaches the system, wherein the blower is disposed downstream from the chamber, between the destroyer and the chamber (See Figure 6; See col. 5, lines 59-65 – converter 20).

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: Childers [U.S. Patent No. 5,173,258]; Lutz [U.S. Patent No. 5,087,419]; and Childers et. al. [U.S. Patent No. 5,876,664] each teach vapor decontamination systems, where Childers ('258) and Childers et. al. ('664) each provide the teachings for closed-loop circulating systems for supplying a vaporized hydrogen peroxide to a region, a generator for generating the vaporized hydrogen peroxide, and a destroyer within the closed loop for breaking down the vaporized hydrogen peroxide. Lutz ('419) also discloses a destroyer within the closed loop for breaking down the vaporized hydrogen peroxide. Each of these references fail to provide a bypass conduit bypassing the destroy and a controller operable to cause the vaporized hydrogen peroxide to bypass the destroyer during a pre-determined phase operation.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brad Y. Chin whose telephone number is 571-272-2071. The examiner can normally be reached on Monday – Friday, 8:00 A.M. – 5:00 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sun (John) Kim, can be reached at 571-272-1142. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

byc
September 11, 2005

JOHN KIM
SUPERVISORY PATENT EXAMINER